

# BLATTODEA

## Cockroaches / Waterbugs

The name Blattodea is derived from "*blatta*", the Greek word for cockroach.



[Classification](#)

[Life History & Ecology](#)

[Distribution](#)

[Physical Features](#)

[Economic Importance](#)

[Major Families](#)

[Fact File](#)

[Hot Links](#)

## Life History & Ecology:

The cockroaches, often known as "waterbugs", are scavengers or omnivores. They are most abundant in tropical or subtropical climates, but they also inhabit temperate and boreal regions. Some species are commonly found in close association with human dwellings where they are considered pests. Cockroaches have an oval, somewhat flattened body that is well-adapted for running and squeezing into narrow openings. Rather than flying to escape danger, roaches usually scurry into cracks or crevices. Much of the head and thorax is covered and protected dorsally by a large plate of exoskeleton (the pronotum).

When cockroaches lay eggs, the female's reproductive system secretes a special capsule around her eggs. This structure, known as an oötheca, may be dropped on the ground, glued to a substrate, or retained within the female's body. Production of an oötheca is a special adaptation found only in cockroaches and

praying mantids. This similarity suggests a close phylogenetic relationship between these groups and explains why some taxonomists prefer to lump them into a single order (Dictyoptera).

## Distribution:

**Common throughout most of the world, most abundant in tropical and subtropical climates.**

	<b>North America</b>	<b>Worldwide</b>
<b>Number of Families</b>	<b>5</b>	<b>5</b>
<b>Number of Species</b>	<b>50</b>	<b>~4000</b>

## Classification:

Hemimetabola  
incomplete development (egg, nymph, adult)

Orthopteroid  
closely related to Orthoptera and Mantodea

## Physical Features:



Adult



Nymph

### Adults

1. Antennae slender, filiform
2. Pronotum oval, shield-like, covering much of head and thorax
3. Legs adapted for running; tarsi 5-segmented
4. Front wings thickened; hind wings membranous, pleated
5. Cerci short, multi-segmented

### Immatures

1. Structurally similar to adults
2. Developing wingpads often visible on thorax

## Economic Importance:

Cockroaches are among the most cosmopolitan of all insect pests. They are associated with human dwellings throughout the world, hiding in cracks and crevices during the day and emerging at night to forage for food and water. Although they do not sting or bite, they are usually associated with unsanitary conditions and may carry a variety of human pathogens on their bodies. The decomposing remains of dead roaches (and their feces) are an important source of household "dander" that becomes airborne and provokes respiratory allergies in sensitive people. But cockroaches also have proven to be very useful as research tools, particularly for the study of insect physiology and toxicology.

## Major Families:

- **Blattidae** -- includes the Oriental cockroach (*Blatta orientalis*) and the American cockroach (*Periplaneta americana*)
- **Blatellidae** -- includes the German cockroach (*Blattella germanica*)

## Fact File:

- The American cockroach, *Periplaneta americana*, is an introduced species that probably originated in Africa.
- Some cockroaches in the family Polyphagidae live as commensals in the nests of ants.
- *Gromphadorhina portentosa*, a species from Madagascar, can force air out of its tracheal system to produce an audible hiss. This behavior is used to scare predators. These large, slow-moving cockroaches are sometimes kept as pets.
- Despite their bad reputation, only about a dozen species (out of 4,000 worldwide) are regarded as pests.
- The Surinam cockroach, *Pycnoscelus surinamensis*, is the intermediate host of a nematode (*Oxyspirura mansoni*) that may cause blindness in poultry.

## Hot Links and Illustrations:

- [Cockroach Picture Gallery](#)
- [The Cockroach Home Page](#)
- [Orkin's Guide to Roaches](#)
- [Gordon Ramel's Dictyoptera Page](#)
- [Ecowatch Blattodea Page](#)
- [Tree of Life Web Project - Blattaria](#)
- [Discover Life - Blattodea](#)

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Return to  
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